

Aves, *Micropygia schomburgkii* (Schomburgk, 1848), *Veniliornis mixtus* (Boddaert, 1783), *Culicivora caudacuta* (Vieillot, 1818) and *Coryphaspiza melanotis* (Temminck, 1822): Documented records in the southern Espinhaço Range, Minas Gerais, Brazil

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ABSTRACT: We present new records of four open-habitat birds in the southern Espinhaço Range, state of Minas Gerais, also known as the Quadrilátero Ferrífero. Three of these species (*Micropygia schomburgkii*, *Veniliornis mixtus* and *Coryphaspiza melanotis*) are inedit occurrences for the region and two are globally threatened (*C. melanotis* and *Culicivora caudacuta*), what draws attention for the preservation of native open-habitats within the Quadrilátero Ferrífero region.

The southern part of the Espinhaço Range in Minas Gerais, also known as the Quadrilátero Ferrífero, is a mountain complex located between the municipalities of Ouro Branco and Belo Horizonte (Echternacht *et al.* 2011). It is considered a priority area for biodiversity conservation in Minas Gerais (Drummond *et al.* 2005) and has been recently recognized as an area of endemism (Echternacht *et al.* 2011). It also embodies the Important Bird Areas (IBA's) Serra do Caraça and Ouro Preto/Mariana (Bencke *et al.* 2006). Recent records of rare and threatened grassland birds in the southern Espinhaço Range have drawn attention to the conservation of its native grassland remnants (Lopes *et al.* 2010; Mazzoni and Perillo 2011). Here we present new records of four open-habitat bird species in the Quadrilátero Ferrífero, of which three are certainly new for this region.

Records presented here were obtained during fieldwork by the authors in the state of Minas Gerais between 2008 and 2011. The study area comprehends the municipalities of Caeté, Rio Acima, Nova Lima, Itabirito, Brumadinho and Ouro Preto (Figure 1), all located within the Quadrilátero Ferrífero and near the capital city of Belo Horizonte. A brief description of the study sites, as well as geographic coordinates (datum WGS 84) and altitude, can be found in the species accounts below. Birds were identified with binoculars or by their vocalizations. Whenever possible, photographs were taken. Vocalizations were recorded using Sony PCM-M10, Marantz PMD-222 and Panasonic RR-US450 digital tape-recorders, and Sony ECM-674 and Sennheiser ME-67 shotgun microphones. These recordings

have been deposited at the Arquivo Sonoro Prof. Elias Coelho (ASEC), Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil, and in personal sound databases of the authors (LGM and GBM). Taxonomic nomenclature follows Comitê Brasileiro de Registros Ornitológicos (CBRO 2011) and botanic terms were used according to Ribeiro and Walter (1998).

Ocellated Crane *Micropygia schomburgkii* (Schomburgk, 1848) (Rallidae): This species is considered Endangered in Minas Gerais (Copam 2010) and Data Deficient in Brazil (Machado *et al.* 2005). On 15 April 2008 EAF and GBM heard one individual in a *campo sujo* grassland, at the district of Mingu, Rio Acima (20°02'37" S, 43°46'17" W – 1,178 m). On two subsequent visits to the site, on 20 April 2008 and 20 January 2010, GBM attracted the species using playback and tape-recorded it in a *cerrado ralo*, close to Ribeirão da Prata, a small stream on the limits between Caeté and Rio Acima (20°01'53" S, 43°43'46" W – 1,023 m and 20°02'32" S, 43°42'51" W – 1,221 m). During May 2011 the species was tape-recorded by GBM in *campos limpos* and *campos sujos* at four different sites of Serra da Moeda, in the municipalities of Nova Lima (20°06'20" S, 43°57'27" W – 1,390 m and 20°04'39" S, 43°57'31" W – 1,300 m) and Brumadinho (20°07'36" S, 43°58'53" W – 1,440 m and 20°07'08" S, 44°00'01" W – 1,340 m). LGM and ECD also tape-recorded one individual responding to playback on 02 October 2011 in a *cerrado ralo* close to the left bank of the Rio das Velhas (20°09'39" S, 43°47'35" W – 900 m) (Figure 2). The vegetation of the latter site was composed of tall grass with some rocky

outcrops and sparse individuals of *Vochysia thyrsoidea*, *Stryphnodendrum* sp., *Copaifera langsdorfii* and *Vellozia* sp. The Ocellated Crane has recently been found at Serra da Canastra, Triângulo Mineiro and Alto Paranaíba regions (Vasconcelos et al. 2006; Marçal Júnior et al. 2009; Lopes et al. 2010). Elsewhere, there is an extra-limital record of the Ocellated Crane from Ilha Comprida, coastal São Paulo (Barnett 2000), which was assigned to a vagrant bird, probably natural of the cerrado grasslands of interior São Paulo. That is clearly not the case here, and we state that records of *M. schomburkii* in Minas Gerais are currently increasing, probably due to the knowledge of its vocalization by ornithologists and the use of playback technique. Thus, our records are the first occurrences of this species at the Quadrilátero Ferrífero and expand its range over 300 km eastbound, in relation to the nearest recording locality, Serra da Canastra National Park (Vasconcelos et al. 2006).

Checkered Woodpecker *Veniliornis mixtus* (Boddaert, 1783) (Picidae): A single individual was heard, attracted using playback and photographed by LGM and TOA on 06 November 2009 southeast of the district of Mingu, Rio Acima (20°05'14" S, 43°42'04" W – 1,350 m) (Figure 3A). The vegetation of the site consists of *campo limpo* and *campo sujo* alternated with upper montane semideciduous forests along the river drainages.

This record represents a range extension of over 80 km to the southeast in relation to the closest recording locality, municipality of Sete Lagoas, where two males were collected by P.W. Lund in the 1800's (Krabbe 2007). Elsewhere, the species is known to occur in the Espinhaço Range at Serra do Cipó (Melo-Júnior et al. 2001) and Grão Mogol municipality (Vasconcelos et al. 2006).

Sharp-tailed Tyrant *Culicivora caudacuta* (Vieillot, 1818) (Tyrannidae): On 03 September 2010 AP and LGM photographed and tape-recorded two individuals of this species at the district of Miguel Burnier, Ouro Preto (20°26'00" S, 43°47'36" W – 1,370 m) (Figure 3C). The birds were seen in a well preserved patch of *campo limpo* with tall grasses (Figure 3D) and responded to playback by performing quick duets. Our record adds a new locality for this threatened species (Silveira and Straube 2008; Copam 2010; Birdlife International 2011) within the Quadrilátero Ferrífero, where it was previously known to occur at the Serra do Rola-Moça State Park and at the municipality of Congonhas (Lopes et al. 2010).

Black-masked Finch *Coryphaspiza melanotis* (Temminck, 1822) (Emberizidae): This species is considered Endangered in Minas Gerais (Copam 2010) and Vulnerable globally (Birdlife International 2011) and in Brazil (Silveira and Straube 2008). On 15 February 2010, TOA and TOS observed and photographed a group

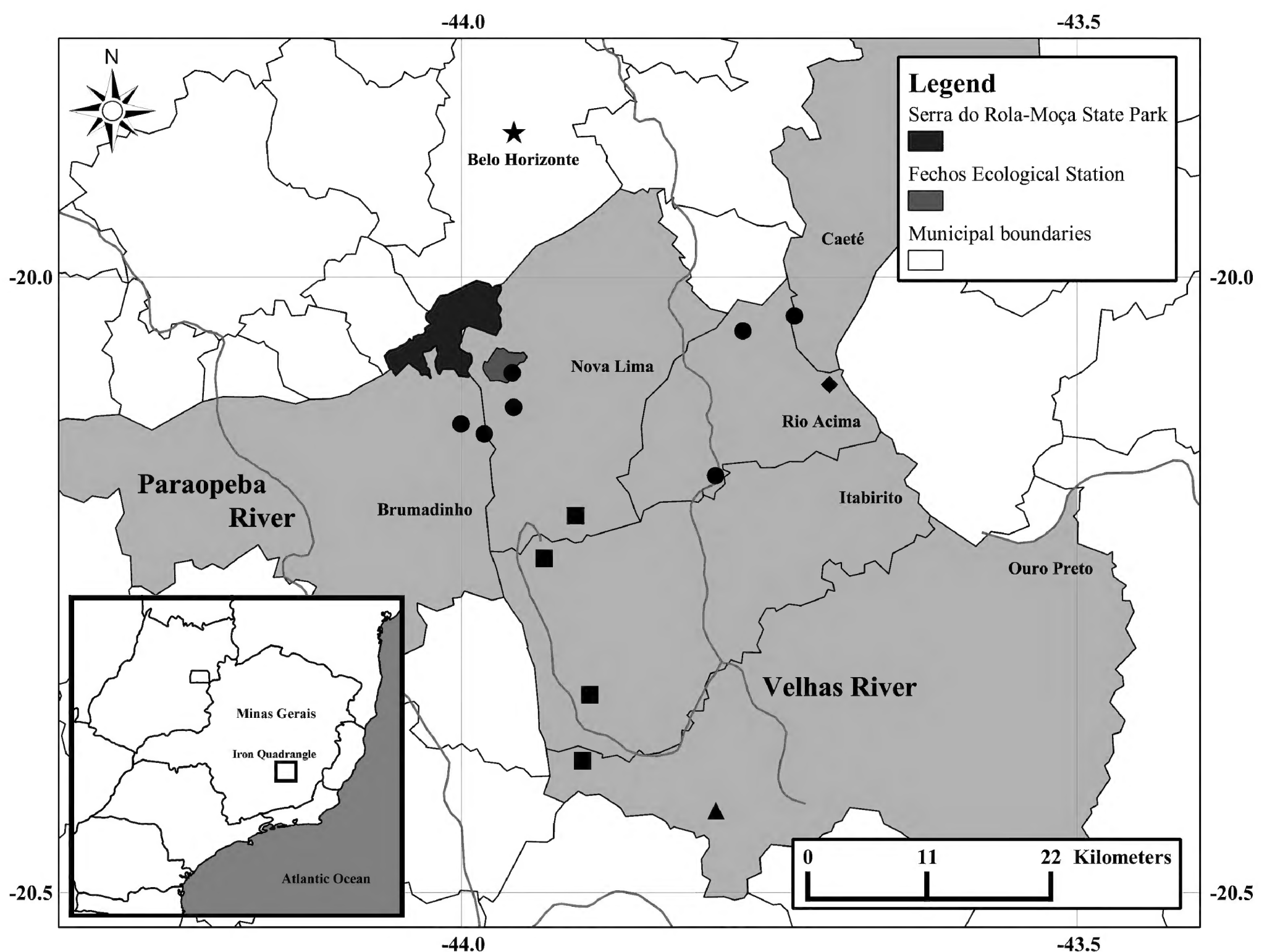


FIGURE 1. Study area showing the localization of the Quadrilátero Ferrífero in the state of Minas Gerais, southeastern Brazil. Gray shaded areas correspond to the studied localities. The star represents Belo Horizonte city. New records are represented by circles (*Microphygia schomburgkii*), squares (*Coryphaspiza melanotis*), diamonds (*Veniliornis mixtus*) and triangles (*Culicivora caudacuta*).

of six individuals, probably a family, of which two showed juvenile plumage, in a *campo limpo* grassland at Nova Lima (20°11'37" S, 43°54'26" W – 1,300 m). The birds were constantly vocalizing full songs and calls. On 20 September 2010, not far from this location, AP and LGM observed and photographed a single individual in a *campo limpo* at the

municipality of Itabirito (20°13'42" S, 43°55'58" W – 1,400 m). The bird was attracted by playback, but only emitted an almost inaudible “insect-like” call, while perching atop a small shrub. On a subsequent visit to the area (04 November 2010), the species was recorded again, but this time singing its full song in response to playback (Figure

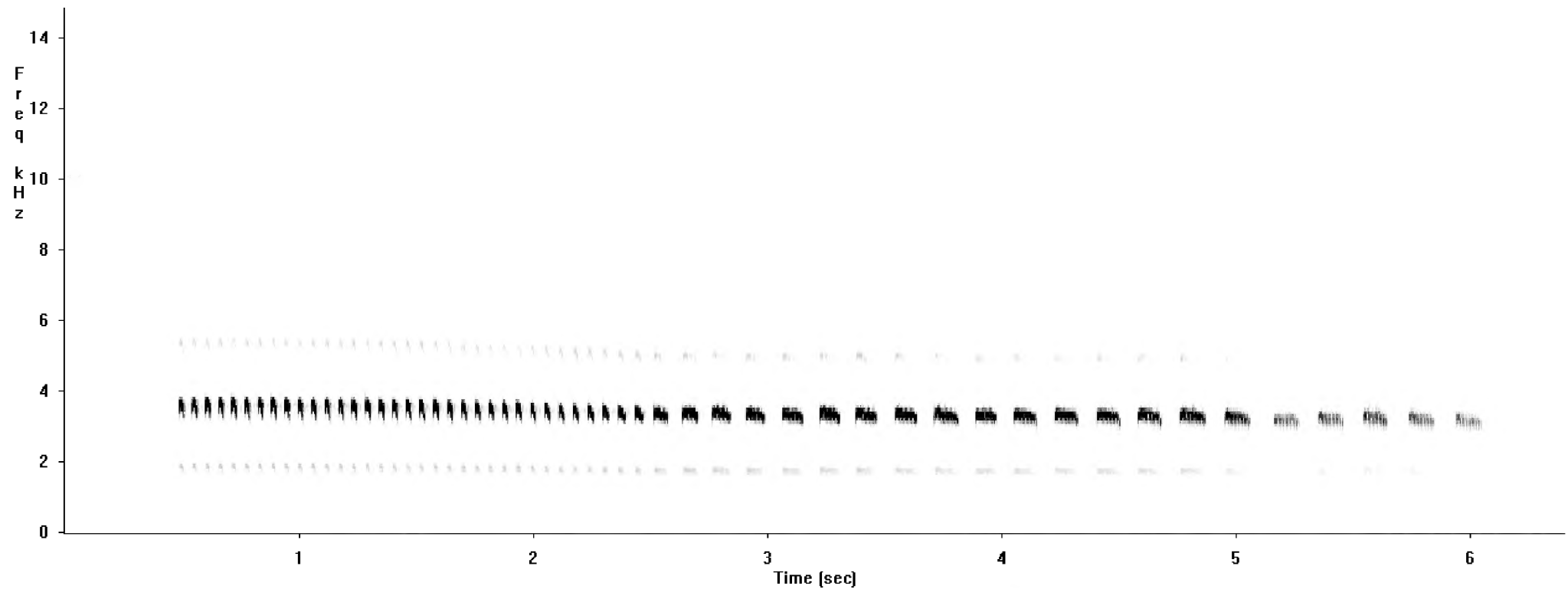


FIGURE 2. Spectrogram of a complete song given by the Ocellated Crake *Micropygia schomburgkii* at the left bank of Rio das Velhas, Rio Acima municipality, Minas Gerais, Brazil. Song recorded on 02 October 2011 and prepared with Syrinx software version 2.6h by Luiz Gabriel Mazzoni. Voice deposited at Arquivo Sonoro Prof. Elias Coelho (ASEC 17135).



FIGURE 3. Photographic records of grassland birds and their habitats in the Quadrilátero Ferrífero region, Minas Gerais state, Brazil. A: the Checkered Woodpecker *Veniliornis mixtus*, at Rio Acima; B: the Black-masked Finch *Coryphaspiza melanotis*, at Ouro Preto; C: the Sharp-tailed Tyrant *Culicivora caudacuta*, at Miguel Burnier district, Ouro Preto; D: a patch of *campo limpo* grassland where *C. caudacuta* has been recorded at Miguel Burnier. Photos: Luiz Gabriel Mazzoni.

3B). On the second encounter, the bird was observed in a recently burnt *campo limpo* that was regenerating from the fire. The species was tape-recorded on both occasions (ASEC 16401-16405). HJCP photographed an adult individual on 23 October 2009 in a well preserved *campo sujo* at Serra das Serrinhas, Itabirito (20°20'21" S, 43°53'40" W – 1,240 m). An additional sight-record was obtained on 27 February 2011 by LGM and AP in a *campo limpo* next to the BR-040 road, at Ouro Preto (20°23'33" S, 43°54'05" W – 1,300 m). The latter record represents a range extension of over 100 km to the southeast in relation to Sete Lagoas, where P.W. Lund collected one individual of *C. melanotis* in the 1800's (Krabbe 2007). Recent records of this species in Minas Gerais were made at Serra da Canastra (Silveira 1998), Serra da Saudade, municipality of Quartel Geral (Freitas *et al.* 2009), Campo das Vertentes and Triângulo Mineiro regions (Lopes *et al.* 2010), municipality of Carrancas (Lombardi *et al.* 2012), and in the northwestern portion of the state, at the municipalities of Unaí and Cabeceira Grande (Lopes *et al.* 2008).

The records of these open-habitat bird species (including grassland specialists) at the Quadrilátero Ferrífero reinforce the hypothesis of a connection via natural grasslands between the Cerrado biome and the Campo das Vertentes, in southern Minas Gerais, linked by the highest parts of the southern Espinhaço Range (Lopes *et al.* 2010). Some species shared by both areas are the Black-masked Finch *Coryphospiza melanotis*, the Sharp-tailed Tyrant *Culicivora caudacuta* (Pacheco *et al.* 2008; Lombardi *et al.* 2012) and the Ochre-breasted Pipit *Anthus nattereri*, which was only recently discovered at the Quadrilátero Ferrífero (Mazzoni and Perillo 2011). Therefore, one would expect to find in this region other Cerrado species not yet recorded at the Espinhaço Range which occur at Campo das Vertentes, such as the Campo Miner *Geositta poeciloptera* (Wied, 1830) and the Sick-winged Nightjar *Hydropsalis anomala* (Gould, 1838) (Pacheco *et al.* 2008; Lombardi *et al.* 2012). The latter one was collected by P. W. Lund at Lagoa Santa during the 1800's (Krabbe 2007).

Originally, more attention has been devoted to the conservation of speciose areas, like the Amazon or Atlantic rain forests, to the prejudice of the savanna regions of South America, even though several grassland species are declining (Parker and Willis 1997; Silva 1999). In fact, for many of these species knowledge is limited, and information about range limits, geographic variation, migratory patterns and population dynamics is lacking (Silva 1999). Our records emphasize the importance for conservation of native open-habitats within the Quadrilátero Ferrífero, a fact already stated by other authors (Lopes *et al.* 2010; Vasconcelos and Rodrigues 2010; Mazzoni and Perillo 2011). This region suffers mainly from iron mining, urban expansion, fire and deforestation (Drummond *et al.* 2005). Native open-habitats must become incorporated by conservation units within the Quadrilátero Ferrífero (Lopes *et al.* 2010), especially the *campos limpos*, *campos sujos* and *cerrados ralos* along the Rio das Velhas basin at the studied municipalities.

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